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AUTHOR Wang, Qi
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ABSTRACT

Two studies focused on the reliability and validity of T.M. Singelis's 24-item Self-Construal Scale (SCS) (1994). In the first study, Cronbach alphas were calculated to assess the internal consistency of the reliability of the two subscales that were supposed to measure individuals' independent and interdependent self construals. The sample was composed of 421 students drawn from a Midwestern university. Results indicated that the scale had moderate internal consistency. In the second study, three types of validity were assessed. Construct validity was tested by using the above sample. Results of factor analysis suggest that about half of the items need to be revised, at least for this specific sample. A second sample of 184 students who had participated in Study 1 was drawn to assess the criterion-related validity. Concurrent validity and predictive validity failed to be established by correlating SCS with Triandis and Singelis's (1998) subjective individualism collectivism scale, and Kim, Sharkey, and Singelis's (1994) conversational constraints. Possible reasons, limitations, and implications are discussed. Future research should be directed at reexamining the items that have composed SCS. (Contains 4 tables of data and 26 references.) (Author/NKA)

Reliability and Validity Tests of Singelis's Self-Construal Scale (1994)

Qi Wang

Communication Studies

Kent State University

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Abstract

This paper consists of two studies that were focused on testing the reliability and validity of Singelis's (1994) 24-item Self-Construal Scale (SCS). In the first study, Cronbach alphas were calculated to assess the internal consistency of the reliability of the two subscales that were supposed to measure individuals' independent and interdependent self-construals. The sample was composed of 421 students drawn from a midwestern university. Results indicated that the scale had moderate internal consistency. In the second study, three types of validity were assessed. Construct validity was tested by using the above sample. Results of factor analysis suggested that about half of the items need to be revised, at least for this specific sample. A second sample of 184 students who had participated in Study 1 was drawn to assess the criterion-related validity. Concurrent validity and predictive validity failed to be established by correlating SCS with Triandis and Singelis's (1998) subjective individualism collectivism scale, and Kim, Sharkey, and Singelis's (1994) conversational constraints. Possible reasons, limitations, and implications are discussed.

RELIABILITY AND VALIDITY TESTS OF SINGELIS'S SELF-CONSTRUAL SCALE

Hofstede (1980) defined culture as "the collective programming of the mind which distinguishes the members of one human group from another" (p. 21). In other words, culture is a collectivity characteristic. Just as people differ in personalities, cultures reveal differences among varied cultures. To distinguish one culture from another, criteria such as power distance, uncertainty avoidance, masculinity, individualism-collectivism (I-C), and high- or low-contextualization can be used (Hofstede; also see Kagitcibasi & Berry, 1989, for a summary). Kagitcibasi and Berry indicated that I-C had been the major dimension of cross-cultural studies in the 1980s, and they predicted that there would be some other variables emerging in the 1990s. Nevertheless, I-C has been proven to be even more developed both theoretically and methodologically during the 1990s (Triandis, Chen, & Chan, 1998). With the development of I-C, a further step was done by Triandis et al.(1986), who attempted to use the measurement of this cultural characteristic to explain individuals' dispositions and behaviors. Later on, however, researchers (e.g., Triandis, 1989) found that cultural level I-C was not a good predictor of behavior. They suggested that the essential reason is that individualism and collectivism may exist simultaneously in an individual in any culture, whereas I-C is unidimensional, and thus it simplifies the explanation of the intrapersonal psychological formation. To solve this problem, Markus and Kitayama (1991) proposed a mediator, self-construal between culture and individuals' behaviors.

Markus and Kitayama (1991) suggested that an individual should have two distinct self-construals. One is independent, and the other is interdependent. They maintained that an individualistic culture should be closely related to its members' high independent self-construals, whereas a collectivist culture would find high interdependent self-construals in its members. This supposition has received mixed results: some researchers (e.g. Kim, Shin, & Cai, 1998; Singelis & Brown, 1995) found that I-C

predicts the level of self-construals as Markus and Kitayama suggested, yet others (e.g., Gudykunst et al., 1996; Oetzel, 1998) found no significant differences in the self-construals of the samples drawn from different cultures. The latter group of researchers found considerable participants in the studies (despite their cultural backgrounds) indicated tendencies of being high or low on both self-construals. Because these researchers used assorted instruments to measure individuals' self-construals, a necessity of testing the reliability and validity of self-construal scales emerged. In this study, I choose to assess the reliability and validity of Singelis's (1994) 24-item Self-Construal Scale for two reasons. First, many researchers (e.g., Kim, 1994; Kim et al., 1998; Kim, Sharkey, & Singelis, 1994) borrowed items from various measures to compose the self-construal instrument, and they provided little information about the entire scale. Second, Singelis's SCS has been one of only two independent self-construal scales that provided detailed rationale and reliability and validity tests. However, because the other scale – Gudykunst et al.'s scale – was even newer than the SCS, and because fewer researchers have used the scale and reported its reliability, Singelis's SCS may be more appropriate.

The remaining sections are organized as follows: First, the constructs (i.e., independent and interdependent self-construals) are introduced. Second, the development of SCS (Singelis, 1994) is detailed. Third, past research in which SCS was used is reviewed. Fourth, I describe the tests of reliability and validity, and analyze the data. Finally, I discuss the implications of the results.

Literature Review

Self-Construal

Hallowell (1955) maintained that each individual's self is composed of universal and divergent aspects. The universal self is developed when an individual is learning to understand his or her own identity and to differentiate him- or herself from others physically. In the meantime, the individual is also aware of his or her internal activities,

such as thoughts, feelings, and other mental experiences, which lead the person to the awareness of his or her unique self, or the divergent self (Hallowell). Triandis (1989) proposed three aspects in a person's divergent self: the public self, the private self, and the collective self. The public self is the recognized individual by the people around him or her. The private self is the person's view of him- or herself as an individual with unique characteristics, states, and dispositions. The collective self is the person's view of him- or herself as a member of a group.

Based on these assumptions, Markus and Kitayama (1991) argued that although people's primary units of consciousness are their private selves, on some occasions, or in some cultures, the feeling of belongingness to a social collectivity may be even stronger, and consequently, these people may have predominant collective selves rather than private selves. Hence, it is likely that an individual has two selves (or self-construals), though one might be stronger than the other (due to the culture), or the predominance keeps changing (due to varied occasions). Markus and Kitayama (1991) used independent and interdependent self-construals to respectively embody the private and the collective selves along the self-other relationship.

Independent self-construal. Markus and Kitayama (1991) identified independent self-construal as a unitary, unique, and steady self that is distinguished from social aggregations. Individuals with stronger independent than interdependent self-construals are more concerned with the needs, goals, and expressions of themselves rather than those of others. They are especially aware of their self-images, such as who they are and want to be, what they should do, how they should behave, and so on. Consequently, they show less consideration about situational and relational requirements (Markus & Kitayama).

Interdependent self-construal. An interdependent self was defined as a relational and flexible self (Markus & Kitayama, 1991). This definition does not imply that people

with stronger interdependent than independent self-construals want for personalities and assertiveness. Rather, they are likely to pay more attention to the group need than their own when the two needs conflict. As Markus and Kitayama noted, such individuals tend to regulate their opinions, attitudes, and decisions to be in congruity with the primary task of interdependence.

Scale Development

Following Markus and Kitayama's (1991) conceptualization, Singelis (1994) developed a 24-item measure of independent and interdependent self-construals. First, he reviewed five relevant measurements: Hui's (1988) 63-item Individualism-Collectivism (INDCOL) Scale; Triandis, Leung, Villareal, and Clack's (1985) 132-item Idiocentrism-Allocentrism Scale; Triandis et al.'s (1986) 21-item Idiocentrism-Allocentrism Scale; Yamaguchi, Kuhlman, and Sugimori's 8-item I-C scale (1994); and Cross and Markus's (1994)10-item Independent-Interdependent Self-Construal scale. Singelis briefly reviewed reliabilities of these scales, and reported results of studies done by using these scales.

Second, Singelis (1994) drew relevant items from the above measures and rewrote them to make them (a) focus on individuals' self-construals and (b) appropriate for the student samples. Here is an example given by Singelis: "the INDCOL (Hui, 1988) item 'Young people should take into consideration their parents' advice when making education/career plans' was rewritten as 'I should ... my parents' advice. ...'" (Singelis, p. 584). Singelis also added some other items to measure "the constellation of thoughts, feelings, and actions composing independent and interdependent self-construals" (p. 584). Finally, Singelis revised the items to make them clear and concise. The initial SCS contained 45 items.

Third, Singelis (1994) drew 364 students with diverse ethnical backgrounds from the University of Hawaii at Manoa. Two hundred and four were females, and 154 were

males. He randomized the items and asked the respondents to rate their agreement with the items on a 7-point Likert type format. Meanwhile, he designed four hypothetical scenarios of conversations between two communicators, and required the respondents to indicate the influences the scenarios could have had on the communicators. He did this to assess the predictive validity of the scale because, according to Triandis (1989), individuals who have predominantly collective selves should attribute more influence to the situations than those with predominantly private selves. Results of this design will be discussed later.

To determine the most useful items in measuring the two dimensions of self, Singelis (1994) used a principal components factor analysis with varimax rotation. A two-factor solution was set, a priori. Items not loading highly (lower than .35) on either factor or loading approximately on the two factors were eliminated. A second factor analysis with oblique rotation was undertaken to verify if the two factors did not correlate. The final scale was comprised of 24 items with 12 on each factor. The two factors were orthogonal ($r = -.044$, $p > .05$). Cronbach alphas for the independent and interdependent subscales were respectively .69 and .73. Further, Singelis (1994) carried out a confirmatory factor analysis to compare the two-factor model with a one-factor model (because previously I-C had been taken as one dimension with two poles). Results indicated a better fit in the two-factor model. Therefore, Singelis concluded that the divergent validity for the two factors was established, and the two-factor model is superior to a one-factor model.

To see if the superiority of the two-factor model would duplicate, Singelis (1994) drew a second sample, which was composed of 165 students from the same university, with gender and ethnic composition similar to the first sample. The instrument contained the final 24 items randomly ordered. Cronbach alphas were .70 for the independent and .74 for the interdependent subscales. The two subscales did not significantly correlate ($r =$

.16, $p > .05$). Again, the two-factor model was a better fit than the one-factor model. Thus, both the divergent validity and orthogonal relationship were replicated.

Finally, Singelis (1994) inspected four types of validity for SCS. First, he claim that the face validity was high because the items directly tapped the characteristics of the constructs. Second, the scale had high content validity, because it covered a variety of thoughts, perceptions, and behaviors that had been defined for the constructs. Third, the scale had high construct validity. According to Markus and Kitayama's (1991) theoretical framework, Asians should have higher interdependent and lower independent self-construals than North Americans. Singelis compared differences between Asian American and Caucasian American participants on both subscales. The results were consistent with Markus and Kitayama's assumptions. The mean of Asian Americans' interdependent self-construals was higher than that of Caucasian Americans, whereas the mean of the former group's independent self-construals was lower than that of the latter group.

Similarly, Singelis (1994) argued that SCS had predictive validity. As mentioned above, to assess the predictive validity of the scale, he designed four scenarios and some questions asking how much the respondents would attribute the conversations to situations. He hypothesized that high interdependent self-construal should predict more attribution to situations than its low counterpart. Results supported this proposition. Self-construal alone appeared to be a better predictor than ethnicity alone in the amount of attribution to situations. Also, individuals with high interdependent self-construals across races attributed more to situations than Caucasian Americans and those with low interdependence scores.

Past Applications of SCS

Because of its recency, the SCS has not been cited much, as noted in the Social Sciences Citation Index. In 1995, Singelis and Brown developed a theoretical framework

and methodology in linking variables at the cultural level to the individual level. They supposed that self-construal is the mediator. In application of the theory, they drew a sample with approximately equal representation of Caucasians and Asians in the University of Hawaii. They used the SCS to measure the participants' self-construals, and the reported Cronbach alphas for the independent and interdependent subscales were .73 and .69. They found that self-construal mediated the cultural individualism/collectivism and the individual tendency of being independent or interdependent.

Also in 1995, Singelis and Sharkey used the SCS to measure participants' self-construals in a study to see if a relationship exists between self-construal and embarrassability. They hypothesized that a positive relationship would exist between interdependent self-construal and embarrassibility, whereas a negative relationship would exist between independent self-construal and embarrassability. The sample was again drawn from the University of Hawaii, with about an equal mixture of Asian Americans and European Americans. The researchers reported Cronbach alphas of .70 for the independent self-construal and .73 for the interdependent self-construal. The hypothesis was supported.

In 1997, to assess if self-construal is mediated by self-esteem and relationship harmony in life satisfaction, Kwan, Bond, and Singelis used SCS in measuring participants' self-construals. The Cronbach alphas were .70 and .74 respectively for the independent and interdependent self-construals. Two samples were drawn from Hong Kong and mainland United States. The hypothesis was supported. Self-construal was shown to influence life satisfaction through the mediating agency of self-esteem and relationship harmony in equivalent ways across these two cultural groups.

In 1999, when assessing if self-construal and ethnicity function together in influencing individuals' self-esteem and embarrassability, Singelis, Bond, Sharkey, and Lai used SCS to measure participants' self-construals. They reported Cronbach alphas of

.66 for the independent subscale and .61 for the interdependent subscale. They drew three samples from Hong Kong, Hawaii, and mainland United States. Their hypothesis was partly supported. Although independence and interdependence accounted for most of the variance in embarrassability, data indicated no difference in the relationship between self-construal and self-esteem across the three ethnocultural groups. The researchers concluded that maybe similar psychological processes contribute to self-esteem and embarrassability across the ethnocultural groups.

In conclusion, past research indicated that the reliability of SCS is not very high (with alphas ranging from .61 to .74). However, due to the factor that most of the hypotheses were supported, it is possible that SCS is a valid scale. Next, I will present the reliability and validity tests of SCS. Two studies were conducted. Study 1 was aimed at assessing the reliability of the scale. I adopted the internal consistency method, because this was the most recommended method by Carmines and Zeller (1979). Study 2 was comprised of construct, concurrent, and predictive validity tests.

Reliability and Validity Tests

Study 1

Sample 1

The total sample consisted of 421 undergraduate students enrolled in an introductory communication course at a midwestern university, with 173 (41.2%) males and 212 (50.3%) females. Thirty-six (8.5%) participants did not or failed to indicate a valid gender. The youngest participant was under 18 and the oldest above 30. The majority were between 18 and 24 (81.0%). Most participants (85.3%) were Caucasian, and the rest were African American (5.9%), Asian (2.2%), Hispanic (3.7%), Native American (0.7%) or other (2.2%).

Procedure

The items of SCS were randomized and arranged in the middle of a questionnaire booklet that contained 13 scales measuring various aspects of communication sphere. A 5-point Likert type scale was used for the participants to rate their agreement on each statement in the 12-item subscale of the independent self-construal ($M = 3.41$, $SD = 0.46$) and 12-item subscale of the interdependent self-construal ($M = 3.17$, $SD = 0.53$), where 5 = Strongly Agree, and 1 = Strongly Disagree.

Results

Cronbach alphas were calculated to assess the internal consistency of each subscale. For the independent self-construal subscale, Cronbach alpha was .74 ($N = 414$). For the interdependent self-construal subscale, Cronbach alpha was .70 ($N = 383$). The results were consistent with those reported by past researchers. Carmines and Zeller (1979) argued that a reliable scale should have a Cronbach alpha of .80 at least. According to this criterion, the SCS is not reliable enough.

Study 2

Construct Validity

The same data obtained from the above sample were used here. The construct validity of SCS was tested by using two principal components factor analyses with varimax rotation. First, as Singelis (1994) did, I preset a two-factor solution. To isolate the factors, a minimum primary loading of .50 was used, with the secondary loading being approximately .30 because this is one of the widely accepted criteria in factor loading (Stevens, 1986). Seven items loaded on the first factor, and six loaded on the second. The two factors accounted for 27.66% of the total variance. Tables 1 and 2 summarize the factor analysis with preset two-factor solution, and means and standard deviations of items of SCS that loaded on the two factors.

The first factor contained seven items that focus on the preference to be independent from others (e.g., "My personal identity independent of others, is very

important to me," "I prefer to be direct and forthright when dealing with people I've just met"). The eigenvalue for this factor was 4.414, and it accounted for 18.39% of the variance.

The six items loaded on the second factor dealt with the concern about the ingroup relationships (e.g., "I will sacrifice my self-interest for the benefit of the group I am in," "I will stay in a group if they need me, even if I am not happy with the group"). This factor had an eigenvalue of 2.224, and it accounted for 9.27% of the variance. The rest loaded low (e.g., "I am the same person at home that I am at school", "I respect people who are modest about themselves"), or about equally on both (e.g., "I have respect for authorities with whom I interact").

Second, a principal components factor analysis was undertaken without presetting the number of factors. The same loading rule as above was used to isolate factors. Eight factors appeared in the analysis. However, 4 factors were eliminated because the scree plot indicated a big drop from the fourth factor to the fifth. In the meantime, none of the last 4 factors contained three items, which was required to meet the loading criteria. Five items failed to load on any of the factors either because of low loading on each factor (e.g., "If my brother or sister fails, I feel responsible") or due to approximately equal loading on two factors (e.g., "My happiness depends on the happiness of those around me"). The four sustained factors accounted for 39.65% of the total variance. Table 3 and 4 summarized the factor analysis and means and standard deviations of items of SCS that had loaded on the four factors.

The eigenvalue of the first factor was 4.414, and it explained 18.39% of the variance. This factor included items that focus on the highly held values of an individual, according to North American culture except for one unexpected item. This conclusion is thus made because in the 5 items that loaded on the factor, 4 were dealing with the independent self-construal such as personal identity, uniqueness and difference from

others, whereas one was originally a component of the interdependent self-construal subscale: "I respect people who are modest about themselves." Modesty has long been considered to be merit in East Asian culture but not typically in American values (Hui, 1988; Samover, Porter, & Jain, 1981), and thus treated as an interdependent self-construal item by Singelis (1994). Its presence with other highly held values on the same factor in this Caucasian-dominated sample of the midwestern university may imply a change in the values of some North American individuals.

The second factor was comprised of three items. They were similar with the second factor obtained in the two-factor solution above. It had an eigenvalue of 2.224, and explained 9.27% of the variance. The factor was focused on the concern about ingroup relations (e.g., "I often have the feeling that my relationship with others are more important than my own accomplishments," "I will stay in a group if they need me, even when I'm not happy with the group").

The eigenvalue of the third factor was 1.642, and it accounted for 6.84% of the variance. The three items in the factor focus on the respect of decisions made by group or parents (e.g., "I should take into consideration my parents' advice when making education/career plans," "It is important to me to respect decisions made by the group"). It is interesting that items about ingroup relationship (factor 2) and respect of group decisions (factor 3) were not loaded on the same factor because both indicate a concern about ingroup relationships. Possibly this is an indication that differences exist between obligatory and voluntary self-group relationship maintenance.

The last factor had an eigenvalue of 1.237 and explained 5.15% of the variance. It consisted of three items that deal with respect to authorities (e.g., "I would offer my seat in a bus to my professor") and value of good health ("I value being in good health above everything"). Again, this was unexpected because deference paid to authorities was supposed to be measuring the interdependent self-construal whereas care about one's

health should be measuring the independent self-construal. This finding was disadvantageous to Singelis's (1994) supposition that the two subscales be orthogonal.

In fact, the most surprising result was found when an effort was made to assess if the two subscales have an orthogonal relationship. Singelis (1994) found that the two were unrelated to each other ($r = -.044$, $p > .05$). In this study, however, a strong positive relationship ($r = .321$, $p < .01$) was found. A principal axis factor analysis was conducted to retest the correlation and factor loading. The same correlation coefficient was attained, and similarly, four factors were uncovered. Thus, divergent validity was not established.

The construct validity test has brought up two issues. First, the scale seems to have some, but not enough construct validity. In the second principal components analysis, 14 items successfully loaded on the sustained factors, which demonstrated that at least more than half of the items were measuring what the author supposed to measure. Meanwhile, however, when the two-factor solution was set a priori, only 13 items loaded on them. The rest (11 items) were dropped either because of low loading or approximate loading on both factors. Thus, these 11 items should be revised.

Second, two items seem to be measuring what they are not supposed to measure. As discussed above, modesty did not emerge in the factor that characterized interdependent self-construal as expected. To the contrary, it loaded quite high on the supposed independent self-construal measure. Concern about health, which Singelis (1994) had intended to measure the independent self-construal, loaded on the factor that contained two items which seem to be measuring the interdependent self-construal. Consequently, these items should be rethought and at least revised for future use.

Concurrent Validity

Concurrent validity was assessed by correlating SCS with Triandis and Singelis's (1998) subjective individualism and collectivism (SINDCOL) scale. First of all, the reader should be informed that SINDCOL is different from the cultural level I-C. "To

simplify the terminology," Triandis and Singelis indicated, "we will use the words individualism and collectivism, but mean that these terms apply at the individual level (i.e., reflect the way the culture, demographics, and experiences have influenced the individual)" (p. 37). As they revealed in their words, the SINDCOL scale is in fact another scale to measure a person's "self-construal." The difference is that Markus and Kitayama's (1991) self-construal was developed from cultural differences, whereas Triandis and Singelis added more factors to measure one's "individualism/collectivism" in SINDCOL, such as age, education, marital status, size of community one lives in, travel experience, and cultural background of the persons that most influenced an individual during his or her growing up process. Thus, SINDCOL scale was beyond the cultural limitation, and was more universalized to measure individuals' self-construals across cultures than Markus and Kitayama's (1991) original self-construal. This is a big stride because since the birth of self-construal, researchers (e.g., Kwan, et al., 1997; Kim et al., 1998) have found that in each culture, there are significant numbers of individuals whose self-construals did not fit the expected direction – high on one and low on the other. They suggest that the phenomenon of biculturals (individuals high on both self-construals) and marginals (individuals low on both self-construals) needs advanced exploration.

Triandis and Singelis (1998) designed SINDCOL scale to measure a person's self-group relationship from comprehensive aspects, such as culture, age, education, marital status, and size of the community, etc. They also suggested that SINDCOL scale should correlate with other measures of self-construal. Thus, if the SCS had concurrent validity, it should be related to SINDCOL scale. Following Triandis and Brown's supposition, the following two hypotheses were proposed.

H1: Subjective collectivism will be positively related to interdependent self-construal.

H2: Subjective individualism will be positively related to independent self-construal.

To assess the hypotheses, a second sample of 184 volunteers who had participated in study 1 was drawn. Fifty-five percent of participants (N = 102) were female and 46% (N = 82) were male. Again, the majority (82.9%) were Caucasian, and the rest were African American (9.7%), Hispanic (4.6%), Asian (3.4%), and Native American (2.9%). The age clustered at 19 to 24 (97.2%), as in the first sample. Therefore, the two samples were homogeneous.

Each participant was issued a questionnaire that contained four hypothetical scenarios and 24 statements to assess a person's perception of conversational constraints (which will be discussed later in the predictive validity test), and randomized items of SINDCOL scale, with 12 measuring subjective individualism (M = 6.17, SD = 1.18) and 12 measuring subjective collectivism (M = 5.54, SD = 1.15). Participants were asked to rate their SINDCOL on a 10-point scale, where 10 = Very Collectivist/Individualistic, and 0 = Not At All Collectivist/Individualistic (as statements fitted). After completing the questionnaire, the participants attended another research project in the communication field (irrelevant to this project) and left. Again, they received two research points for the participation.

Pearson correlation coefficients were computed to assess both hypotheses. For Hypothesis 1, no significant relationship was found between subjective collectivism and interdependent self-construal ($r = -.029$, $p = .70$). Hypothesis 2 also failed to be supported. Subjective individualism and independent self-construal were not significantly correlated ($r = -.051$, $p = .50$). Therefore, concurrent validity of the SCS is in question.

There are three potential reasons for the results. First, similar to its lacking construct validity, the SCS lacks concurrent validity. Second, SINDCOL is not an appropriate scale to correlate with the SCS, which was opposite to what Triandis and

Singelis (1998) had suggested. Third, the SINDCOL scale itself lacks validity. This is possible because Cronbach alphas for subjective collectivism and individualism were not high – .65 and .62, which was even a little lower than Triandis and Singelis had reported (.71 and .69). As Carmines and Zeller (1979) maintained, if a scale is not reliable, then it must be invalid. Besides, due to its recentness, SINDCOL has not received further reliability and validity tests. Therefore, future research should explore the above to search for reasons.

Predictive Validity

Predictive validity was assessed by checking if conversational constraints (Kim et al., 1994) would be predicted by independent and interdependent self-construals. The second sample was asked to rate 24 statements about four hypothetical scenarios, besides completing SINDCOL scale. Kim et al. provided the scenarios and statements, which were intended to measure individuals' perception about conversational constraints.

Kim et al. (1994) argued that in a situation where clarity may damage a relationship, one would be exposed to three conversational constraints: concern for clarity, concern for not hurting the hearer's feelings, and concern for not being negatively evaluated by the hearer. Further, they maintained that because individuals with high independent self-construals are mainly concerned about self-actualization, and prefer a direct communication style, they would indicate great concern about clarity. As a comparison, individuals with high interdependent self-construals are more concerned about self-other relationships; therefore they would make more effort to avoid hurting the other's face or being disliked. Consequently, they would employ communication strategies of an indirect style, and indicate more concern of avoiding hurting the other's feelings and not being negatively evaluated (Kim et al.). The following hypotheses replicated what Kim et al. had done in their research. The reason for such replication, again, was to assess the predictive validity of the SCS, because Kim et al.'s hypotheses

had been supported by using a scale with items they had adopted from several ego-task analysis scales (see Kim et al., for a summary) to measure interdependent and independent self-construals. If SCS had the same predictive validity, the similar results should be obtained.

H1: Concern for clarity will be positively related to independent self-construal.

H2: Concern for avoiding hurting the other's feelings will be positively related to the interdependent self-construal.

H3: Concern for avoiding being negatively evaluated will be positively related to the interdependent self-construal.

As described above, the second sample with 184 individuals was used for retrieving the data. After reading each scenario, participants were asked to rate the importance of the three constraints on a 7-point scale, where 7 = Strongly Agree, and 1 = Strongly Disagree. Here is an abridged example of scenarios: One of your friends in your class just delivered a very poor speech and asks you, "How did I do?" Six statements representing three constraints followed immediately, asking respondents to what degree they would indicate clarity (e.g., "In this situation, I feel it is very important to make my point as clearly and directly as possible"), the avoidance of hurting the other's feelings (e.g., "In this situation, I feel it is very important not to hurt the other's feelings), and the avoidance of not being negatively appraised (e.g., "In this situation, it is very important that the other person does not see me in a negative light").

Correlation coefficients were calculated to assess the hypotheses. None of the hypotheses were supported. There was no significant relationship between independent self-construal and concern for clarity ($r = .065$, $p = .38$), neither were there significant relationships between interdependent self-construal and concern for avoiding hurting the other's feelings ($r = -.041$, $p = .59$), or concern for avoiding being negatively evaluated ($r = -.044$, $p = .57$). Hence, SCS is likely to lack predictive validity as well, though there

were possibilities that the failure of obtaining predictive validity was due to other errors, such as the invalidity of scenarios and questions, random error, and so forth.

Conclusion

Together, the results of reliability and validity tests reflected that SCS lacks reliability and validity. The low internal consistency shown in Study 1 may have foreshadowed the later validity tests. The test of construct validity indicated that only around half of the items were effective items in loading on the factors, and some items contradictorily loaded on the same factor. Thus the scale lacks construct validity. The tests of concurrent validity and predictive validity were indeed testing the criterion-related validity. If the criterion-related validity had existed, the interdependent self-construal should have been positively related to subjective collectivism, concern for others' feelings and not being negatively appraised in conflict potential situations, and the independent self-construal should have been positively related to subjective individualism and concern for clarity in conversations. However, none of the suppositions were supported. Consequently, the validity of the SCS is in question.

Finally, an important consideration of the failure of establishing the validity of SCS is about the sample. In Singelis's (1994) study, the sample was characteristic of various ethnic backgrounds. For example, four times as many Asian Americans (50.1%) were used than Caucasian Americans (13.77%). Sixteen percent were Filipinos and Hawaiians, and only 2.2% were African Americans. Nevertheless, in this study, the predominant race was Caucasian, followed by African American. Asians occupied a microscopic percentage of the total sample. Thus, it is very likely that different samples have caused great discrepancy between the two studies. If this were true, the importance of cultural influences on self-construal should be rethought.

Future research should be directed in reexamining the items that have composed SCS. Also, exploratory studies can be conducted to include comprehensive aspects that may influence an individual's self-construal, and regression analysis be undertaken to see what variables predict self-construal, with what weights, and in what directions. Then, items should be created, rewritten, and distributed accordingly to produce a valid scale.

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Table 1

Factor Analysis Results for Self-Construal Scale (SCS) with Two-Factor Solution

Self-Construal Item	Self-Construal Factors	
	1	2
Factor 1: Independence from others		
1. I enjoy being unique and different from others in many respects.	.691	.056
2. My personal identity independent of others, is very important to me.	.625	.158
3. Having a lively imagination is important for me.	.620	.118
4. I'd rather say "No" directly than risk being misunderstood.	.550	.051
5. I prefer to be direct and forthright when dealing with people I've just met.	.511	.058
6. Speaking up during a class is not a problem for me.	.503	-. 187
7. I am the same person at home that I am at school.	.500	-. 019
Factor 2: Concern about Ingroup Relationships		
8. It is important to me to respect decisions made by the group.	.150	.597
9. It is important to me to maintain harmony within my group.	.300	.565
10. I will sacrifice my self-interest for the benefit of the group I am in.	.095	.540
11. I will stay in a group if they need me, even when I'm not happy with the group.	.002	.539
12. My happiness depends on the happiness of those around me.	.158	.518
13. I often have the feeling that my relationships with others are more important than my own accomplishments.	.049	.500

Note. The retained factors explained 27.66% of the variance after varimax rotation. The first factor had an eigenvalue of 4.414, and explained 18.39% of the variance. The second had an eigenvalue of 2.224, and explained 9.27% of the variance.

Table 2

Means and Standard Deviations of Items of SCS with Two-Factor Solution

Self-Construal Item	M	SD
Independence from Others		
1. I enjoy being unique and different from others in many respects.	3.78	1.03
2. My personal identity independent of others, is very important to me.	3.85	1.07
3. Having a lively imagination is important for me.	3.86	1.01
4. I'd rather say "No" directly than risk being misunderstood.	3.44	1.03
5. I prefer to be direct and forthright when dealing with people I've just met.	3.42	0.91
6. Speaking up during a class is not a problem for me.	3.21	1.17
7. I am the same person at home that I am at school.	3.44	1.12
Concern about Ingroup Relationships		
8. It is important to me to respect decisions made by the group.	3.40	0.96
9. It is important to me to maintain harmony within my group.	3.65	0.99
10. I will sacrifice my self-interest for the benefit of the group I am in.	3.08	0.95
11. I will stay in a group if they need me, even when I'm not happy with the group.	2.97	1.02
12. My happiness depends on the happiness of those around me.	3.11	1.05
13. I often have the feeling that my relationships with others are more important than my own accomplishments.	3.00	0.95

Note. Response options ranged from Strongly Agree (5) to Strongly Disagree (1) in rating the agreement with each statement.

Table 3

Factor Analysis Results for SCS without Preset Factors

Self-Construal Item	Self-Construal Factors			
	1	2	3	4
Factor 1: Highly Held Qualities for Individuals				
1. I enjoy being unique and different from others in many respects.	. 704	. 098	-. 084	. 118
2. I respect people who are modest about themselves.	. 688	. 033	. 132	. 171
3. My personal identity independent of others, is very important to me.	. 664	. 071	. 117	. 129
4. Having a lively imagination is important for me.	. 650	. 040	. 029	. 016
5. I prefer to be direct and forthright when dealing with people I've just met.	. 507	. 014	. 178	. 109
Factor 2: Concern about Ingroup Relations				
6. I will sacrifice my self-interest for the benefit of The group I am in.	. 095	. 726	. 170	. 024
7. I will stay in a group if they need me, even when I'm not happy with the group.	-. 081	. 654	. 163	. 132
8. I often have the feeling that my relationships with others are more important than my own accomplishments.	. 168	. 500	-. 028	. 008
Factor 3: Respect of Group Decisions				
9. It is important to me to respect decisions made by the group.	. 085	. 219	. 754	. 131
10. I should take into consideration my parents' advice when making education/career plans.	. 008	-. 035	. 669	. 004
11. It is important to me to maintain harmony within my group.	. 237	. 300	. 521	.214

Table 3 (Continued)

Factor Analysis Results for SCS without Preset Factors

Self-Construal Item	Self-Construal Factors			
	1	2	3	4
Factor 4: Respect to Authorities and Value of Good Health				
12. I value being in good health above everything.	. 105	-. 085	. 004	. 745
13. I have respect to the authority figures with whom I interact.	. 300	. 060	. 299	. 551
14. I would offer my seat in a bus to my professor.	. 058	. 112	. 273	. 523

Note. The retained factors explained 39.65% of the variance after varimax rotation. The first factor had an eigenvalue of 4.414, the second 2.224, the third 1.642, and the fourth 1.237. The variances explained by the four factors were respectively 18.39%, 9.27%, 6.84%, and 5.15%.

Table 4

Means and Standard Deviations of SCS Items Loading on the Four Factors

Self-Construal Item	M	SD
Highly Held Qualities for Individuals		
1. I enjoy being unique and different from others in many respects.	3.78	1.03
2. I respect people who are modest about themselves.	3.62	1.02
3. My personal identity independent of others, is very important to me.	3.85	1.07
4. Having a lively imagination is important for me.	3.86	1.01
5. I prefer to be direct and forthright when dealing with people I've just met.	3.42	0.91
Concern about Ingroup Relations		
6. I will sacrifice my self-interest for the benefit of the group I am in.	3.08	0.95
7. I will stay in a group if they need me, even when I'm not happy with the group.	2.97	1.02
8. I often have the feeling that my relationships with others are more important than my own accomplishments.	3.00	0.95
Respect of Group Decisions		
9. It is important to me to respect decisions made by the group.	3.40	0.96
10. I should take into consideration my parents' advice when making education/career plans.	3.44	1.14
11. It is important to me to maintain harmony within my group.	3.65	0.99

Table 4 (Continued)

Means and Standard Deviations of SCS Items Loading on the Four Factors

Self-Construal Item	M	SD
Respect to Authorities and Value of Good Health		
12. I value being in good health above everything.	3.37	1.00
13. I have respect to the authority figures with whom I interact.	3.78	1.00
14. I would offer my seat in a bus to my professor.	3.08	1.09

Note. Response options ranged from Strongly Agree (5) to Strongly Disagree (1) in rating the agreement with each statement.

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Signature: Qi Wang	Printed Name/Position/Title: Qi Wang / Graduate student / MA	
Organization/Address: School of Communication Studies, Kent state University, Kent, OH 44240	Telephone: 330-677-1570	Fax: 330-677-3510
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